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Notice of Allowability	Application No.	Applicant(s)	
	10/025,902	MOON ET AL.	
	Examiner	Art Unit	
	Timothy L Rude	2883	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed 08 June 2004.
2. ☒ The allowed claim(s) is/are 1-7,11-15 and 18.
3. ☒ The drawings filed on 08 June 2004 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date <u>20040811</u> . |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

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DETAILED ACTION

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Ms Valerie Hayes on 16 August 2004.

The application has been amended as follows:

Claim 1 is amended to ensure the extended lines of the drain electrode are clearly distinct lines, other than the pixel electrode parts/lines, and on a different layer from the pixel electrode.

In claim 1, the fourth and third from last lines are amended to read:

1. An in-plane switching liquid crystal display device, comprising:
first and second substrates;
a gate line and a data line defining a pixel region on the first substrate;
a common line parallel to and spaced apart from the gate line in a middle

section of the pixel region;

a thin film transistor adjacent to a crossing portion of the gate and data lines, the thin film transistor having gate, source, and drain electrodes;

a first insulating layer on the gate line and common line;

a transparent common electrode on the first substrate and having a plurality of extended portions perpendicular to the common line;

a plurality of transparent pixel electrodes on the first substrate and having a plurality of extended portions perpendicular to the common line;

extended portions extending from the common line between a boundary of the pixel region and an outermost extended portion of the common electrode, wherein the extended portions extending from the common line are on a layer different from the common electrode;

a first storage electrode on the first insulating layer over the common line;

a second storage electrode on the first insulating layer over the gate line, wherein the first and second storage electrodes are connected to the drain electrode by extended lines on a layer different than the pixel electrodes;

and a liquid crystal layer between the first and second substrates, wherein the plurality of extended portions of the pixel electrodes have an alternating pattern with the plurality of extended portions of the common electrode.

Claim 18 is amended to correct improper dependency; "claim 16" is corrected to read - - claim 14 - - :

18. The device of claim [16] 14, wherein the first storage electrode is between the common line and the transverse common electrode.

Election/Restrictions

Claim 1 is generic and allowable. Accordingly, the restriction requirement as to the encompassed species is hereby withdrawn and claims 12 and 18, directed to the species of a second storage electrode connected to the drain electrode is no longer withdrawn from consideration since all of the claims to this species depend from or otherwise include each of the limitations of an allowed generic claim. Claims 19-56, are directed to an invention or species that remains withdrawn from consideration since it does not depend upon or otherwise include all the limitations of an allowed generic claim or linking claim as required by 37 CFR 1.141.

In view of the above noted withdrawal of the restriction requirement as to the linked species, applicant(s) are advised that if any claim(s) depending from or including all the limitations of the allowable generic linking claim(s) be presented in a continuation or divisional application, such claims may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application. Once a restriction requirement is withdrawn, the provisions of 35 U.S.C. 121 are no longer applicable. See *In re Ziegler*, 44 F.2d 1211, 1215, 170 USPQ 129, 131-32 (CCPA 1971). See also MPEP § 804.01.

This application is in condition for allowance except for the presence of claims 18-56 drawn to an invention or species non-elected without traverse. Accordingly, claims 18-56 have been cancelled.

Drawings

The drawings were received on 08 June 2004. These drawings are accepted by the examiner.

Claim Rejections - 35 USC § 112

Rejection of claim 1 under 35 U.S.C. 112, first paragraph, is withdrawn.

Allowable Subject Matter

Claims 1-7, 11-15, and 18 are allowed.

The following is an examiner's statement of reasons for allowance:

Claim 1 is allowable over the prior art of record because the latter, either alone or in combination, does not disclose nor render obvious a liquid crystal display device as claimed comprising: extended portions extending from the common line between a boundary of the pixel region and an outermost extended portion of the common electrode, wherein the extended portions extending from the common line are on a layer different from the common electrode; a first storage electrode on the first insulating layer over the common line; a second storage electrode on the first insulating layer over the gate line, wherein the first and second storage electrodes are connected to the drain electrode by extended lines on a layer different than the pixel electrodes.

The closest combination is Asada et al (Asada) USPAT 5,745,207, in view of Wakagi et al (Wakagi) USPAT 6,300,995 B1.

Asada discloses in Figure 3, second embodiment, (col. 6, line 55 through col. 7, line 5) that is a variation of the first embodiment (col. 4, line 58 through col. 6, line 54) an in-plane switching liquid crystal display device, comprising:

- first and second substrates;
- a scanning wiring, 1 (Applicant's gate line), and a signal wiring, 3 (Applicant's data line), defining a pixel region on the first substrate;
- a common line, 2a, on the middle of the pixel region;
- a thin film transistor, 7, at a crossing portion of the gate and data lines, the thin film transistor having gate, source, and drain electrodes;
- a first insulating layer on the gate line;
- a plurality of transparent common electrodes, 2 (center electrodes, top and bottom), on the first substrate;
- a plurality of transparent pixel electrodes, 4 (right electrodes, top and bottom), on the first substrate;
- at least one extended portion, 2 (common electrodes on left and right, top and bottom, near data lines) extending from the common line at a boundary of the pixel region, and
- a liquid crystal layer between the first and second substrates (Abstract and Summary).

Asada

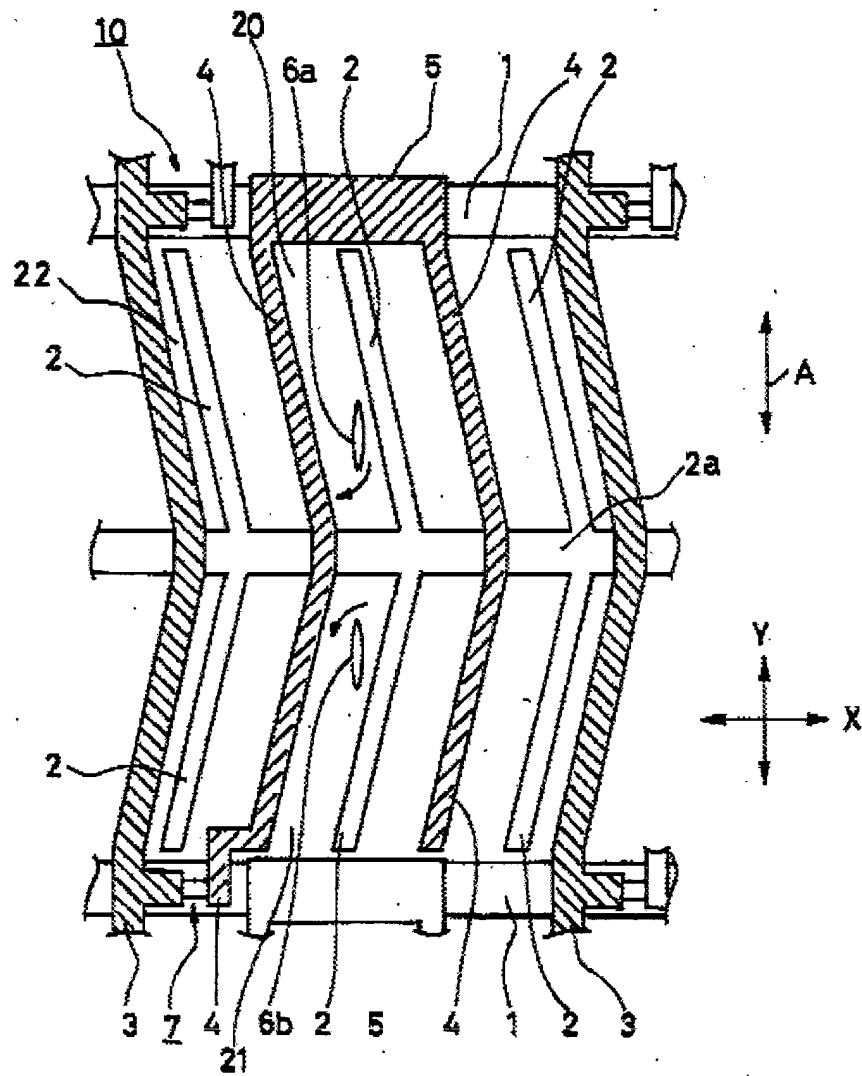
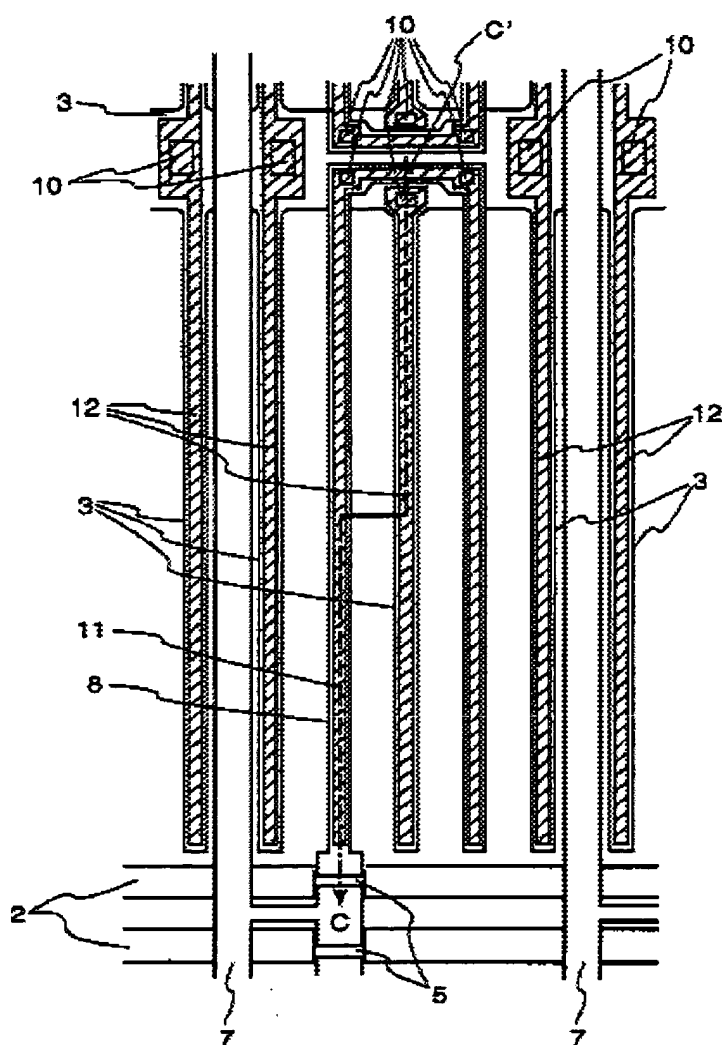


FIG. 3

Wakagi discloses in Figures 6 and 7 the use of extended lines, 8, to electrically connect electrodes to the source/drain of the TFT.

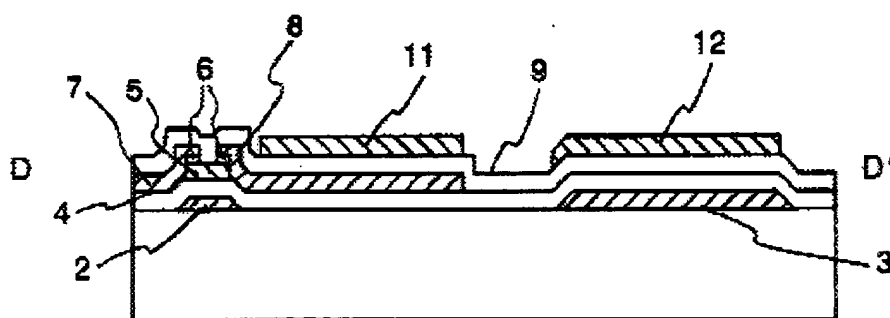
Wakagi

FIG. 6



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Wakagi

FIG. 7

However, no combination with motivation to combine was found to teach a liquid crystal display device as claimed comprising: extended portions extending from the common line between a boundary of the pixel region and an outermost extended portion of the common electrode, wherein the extended portions extending from the common line are on a layer different from the common electrode; a first storage electrode on the first insulating layer over the common line; a second storage electrode on the first insulating layer over the gate line, wherein the first and second storage electrodes are connected to the drain electrode by extended lines.

As to claims 2-7, 11-15, and 18, they are directly or indirectly dependent upon claim 1 with allowable subject matter above.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

References cited but not applied are relevant to the instant Application.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy L Rude whose telephone number is (571) 272-2301. The examiner can normally be reached on Monday through Thursday.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Font can be reached on (571) 272-2415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



tlr

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Art Unit 2883



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